

NEW DISTRIBUTION RECORDS AND SYNONYMY FOR LITTLE-KNOWN DOLICHOPODIDAE (DIPTERA) OF THE PACIFIC NORTHWEST^{1,2}

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ABSTRACT: New distribution records from the Pacific Northwest (Washington, Idaho, and Oregon) are reported for 12 dolichopodid species. Observations on their specific habitats and comments about diagnostic features are provided. *Neurigona uinta* is synonymized with *N. flava*.

During 1983-84 I examined and identified the miscellaneous undetermined western dolichopodids in the James Entomological Collection at Washington State University. Among the materials determined were specimens which provided important range extensions into the Pacific Northwest for 12 species of dolichopodids. Represented are mostly smaller and lesser known species, especially those of the subfamily Sympycninae. Most of the material was collected by me over the past 15 years, principally by sweeping and Malaise trapping throughout Washington, northern Idaho and northeastern Oregon. My determinations were compared with type material in the National Museum of Natural History (Washington, D.C.), the California Academy of Sciences (San Francisco), and the Museum of Comparative Zoology, Harvard University. I also borrowed type material from the Canadian National Collection (Ottawa) and Utah State University for study.

Described species of Dolichopodidae that have been identified here as occurring in Washington and/or adjacent areas of Oregon and Idaho include the following:

Achalcus oregonensis (Harmston and Miller), 1966: 91

This small, yellowish brown species with a black abdomen was originally described in *Systemus* and transferred to *Achalcus* by Steyskal (1970). It represents the only western species of the subfamily Xanthochlorinae. I found specimens to be fairly abundant in sweep samples taken within the moist coastal forest areas of western Washington and on the Olympic Peninsula.

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WASHINGTON: Clallam Co.: Dean Creek, 7 mi. S Sequim, 4 Aug 1972. Pacific Co.: Ft. Canby State Park, nr Ilwaco, 16 Jul 1966; 13-15 Jun 1973. Whatcom Co.: Silver Fir Cmpgr., nr Mt. Baker 8-11 Aug 1974.

***Achradocera arcuata* (Van Duzee), 1924: 48**

Widespread throughout the western states, this species has been captured at more arid localities in the Columbia Basin of eastern Washington and the Snake River canyons in the southeastern portion of the state. It was originally described in the *Chrysotus* "barbatus" group, the species of which were subsequently given generic status by Robinson (1975). Specimens of *A. arcuata* may appear similar to *Chrysotus palpiger* (Wheeler), *Diaphorus aldrichi* Van Duzee and *D. triangulatus* Van Duzee occurring in the same sweep samples. Males are easily recognized by their very elongate and tapering antennal flagellum with equally long apical arista and multiseriate postocular setae.

WASHINGTON: Benton Co., Richland, 18 Aug 1975; West Richland, 12 Jun 1974, 4 Jun 1975. Grant Co.: Soda Lake nr O'Sullivan Dam, 10 Jun 1973. Whitman Co.: Steptoe Cyn., 8 mi. SW Colton, 26 Jul 1973, 29 Jul 1976; 10 mi SW Colton, 3 Aug 1974; Pullman, 29 May 1971.

***Calyxochaetus insolitus* (Van Duzee), 1932: 20**

Reported from Colorado and Utah, *C. insolitus* has been collected from one locality along the east side of Lake Coeur d'Alene in Idaho where it occurs with *Sympycnus pugil* Wheeler and *S. cuprinus* Wheeler. Specimens were swept from lush vegetation typical of moist creek margins in an otherwise dry Douglas fir forest. The species is quite unlike most other *Calyxochaetus* in that the first tarsomere of the male foreleg is subequal to the second rather than shorter. The arista gradually expands to the tip. Females appear metallic or gun metal blue on the upper front.

IDAHO: Kootenai Co.: Carlin Bay, 10 mi. N Harrison, 14-28 Jul 1977; 18-24 Jul 1982.

***Lamprochromus canadensis* (Van Duzee), 1917: 339**

This species has been variously placed in *Diaphorus*, *Sympycnus* and *Telmaturgus* (Robinson, 1967). In the Catalog of Nearctic Diptera (Foote, et al., 1965) it was recorded from several eastern states (New York and North Carolina) and Canada (Ontario) with one questionable record from Utah. Our specimens were collected in sweep samples taken from grassy riparian vegetation bordering slow moving side channels of Asotin Creek

which drains into the Snake River above Clarkston, Washington. They occur with *Teuchophorus utahensis* Harmston and Knowlton and *Peloropecodes cornutus* (Van Duzee) at the Asotin Creek site. The species is recognized among similar appearing ones by the broad, deep violet median band of the mesoscutum and paired velvety black spots just anterior to the wing bases.

WASHINGTON: Asotin Co.: 6 mi. W Asotin, along Asotin Creek, 15 Jun 1985; 22 Jun and 8 Jul 1986.

Neoparentia caudata (Van Duzee), 1917: 338

Described originally in *Sympycnus*, this species was known previously from northern California (Wildcat Creek, Contra Costa Co.). It was transferred by Robinson (1967) to *Neoparentia*. Our specimens are from several diverse locations in eastern Washington. The males are easily recognized from other sympycnines by their rather elongate, thread-like caudal filaments that are nearly as long as the abdomen, and setate midventral tubercle on the fifth abdominal segment.

WASHINGTON: Asotin Co., Fields' Spring State Park, 4 mi. S Anatone, 5 Jul 1984. Grant Co.: Soda Lake, nr O'Sullivan Dam, 18 Sept 1979. Whitman Co.: Lyle Grove Biological Area, 8 mi. SW Pullman, 27 Jul 1985. Yakima Co.: Bear Creek, nr Tieton Ranger Station, 7-9 Jun 1983.

Sympycnus tertianus Loew, 1864: 187

This species is fairly common throughout the coastal areas and at higher elevations (above 640 m) of Washington and Idaho, but specimens often go unrecognized in collections. It frequently occurs with other *Sympycnus* species, especially *S. cuprinus* and *S. pugil*. Unlike the others, the lower thoracic pleuron and abdominal sterna appear pale yellow, concolorous with the legs.

WASHINGTON: King Co., 4 mi. E Skykomish, 18 Jul 1977. Pacific Co.: Ft. Canby State Park, nr Ilwaco, 16 Jul 1977. Whitman Co.: 3 mi. W Colton, 16 Jun 1979. Yakima Co.: Chinook Pass, 12 Jul 1977. IDAHO: Latah Co.: Lost Creek, 12 mi. ENE Potlatch, 22 Jul 1979, 9-12 Jul 1980. Strychnine Creek 15 mi. ENE Potlatch, 2900 ft., 23 Jul 1980.

Sympycnus marcidus wneeler, 1899: 48

This species is evidently widely distributed in the west as it has been reported from Alberta, Utah and California. It was described from

Wyoming. Our specimens are from extreme northeastern Oregon, in the Wallowa Lake area. All were collected by sweeping stream-side grasses. In males of this species, the third tarsomere of the hind leg bears a series of long bristles, the distal-most appearing stronger and distinctly geniculate.

OREGON: Wallowa Co.: Wallowa Lake, 4,000 ft. 28-30 Aug 1973.

Teuchophorus utahensis Harmston and Knowlton, 1942b: 20

Until now this species was known only from Utah. Our specimens were collected in southeastern Washington along with *Lamprochromus canadensis* and *Peloropecodes cornutus*. This species is unusual in that the costal vein is noticeably thickened at mid wing beyond the subcosta, similar to the venation of *Teuchophorus clavigerellus* Wheeler. The male hind tibia bears an erect but flattened, spur-like appendage ventrally, one-third from its base. In our material the mid and hind coxae are not black as in the type series, but slightly darkened. Otherwise, they compare well with paratypes examined.

WASHINGTON: Asotin Co.: 6 mi. W Asotin, along Asotin Creek, 13 Jul to 10 Aug 1985, 22 Jun and 8 Jul 1986.

Peloropecodes cornutus (Van Duzee), 1926: 42

Recorded from California, Oregon, Idaho and Michigan (Foote, Coulson and Robinson, 1965), this species can now be reported from Washington. It is not an uncommon species in several moist canyons draining into the Snake River of eastern Washington. The antenna of males is characteristic for this species in that the flagellum is elongate, nearly as long as the head height, not short and triangular as in females and other species. The arista is inserted near the flagellar base.

WASHINGTON: Asotin Co.: along Asotin Creek, 6 mi. W Asotin, 22 Jun 1986. Whitman Co.: Almota, 25 Jun 1973; 6 mi. S Wawawai, 2 Jun 1977 (Malaise trap); Yakawawa Canyon, 7 mi. WNW Colton, 25-27 Jun 1977; Steptoe Cyn., 8 mi. SW Colton, 26 Jul 1973; 10 mi. SW Colton, 3 Aug 1974.

Hercostomus cachae Harmston and Knowlton, 1941a: 131

Another species known previously only from Utah, *H. cachae* was collected in two seep areas along or above the otherwise arid Grande Ronde River valley of southeastern Washington and northeastern Oregon. The male has a characteristic hypopygium with the inner process (or paramere) like the bacilliform sclerites of the genitalia in muscoid Diptera. In both

sexes, the hind femur is pale basally and dark on the apical half.

WASHINGTON: Asotin Co.: 17 mi. S Anatone, 10 August 1976. OREGON: Wallowa Co.: 39 mi. N Enterprise, 28 June 1976.

Diostracus mchughi Harmston, 1966: 224

Described from Latourelle Falls, Oregon, this species has been collected at waterfalls in two locations within Mt. Rainier National Park, Washington. Dissimilar to *D. olga* Aldrich, the wing in this species is tipped with an apical black spot.

WASHINGTON: Lewis Co.: Stevens Creek at Stevens Canyon Road, 4,000-4,500 ft., 24 August 1973; Pierce Co.: West End Road, nr Puyallup River, 3,500 ft., 12 August 1977.

Neurigona flava Van Duzee, 1913: 40, NEW SYNONYMY

Neurigona unita Harmston and Knowlton 1942a: 80

Neurigona flava was originally described from a single female from Lewiston, Idaho. We have specimens from sites in Oregon and Washington. At each of these localities the small females of *N. flava* were collected simultaneously with similar-sized males identified as *N. uinta* Harmston and Knowlton. This latter species was previously known only from the type series of 16 males from White Rocks (Uinta Co.), Utah (Harmston and Knowlton, 1942a). Our specimens were compared by Fred Harmston with his type material for *N. uinta* and found to be conspecific. Only the larger *Neurigona albospinosa* Van Duzee regularly occurs at the same localities as *N. flava* so that confusing the association of sexes is minimized. Also, at the Yakawawa Canyon and Goose Creek sites, the Malaise traps were in place for several weeks and should have produced any other *Neurigona* species had they been present. On the strength of their associations at several different localities, I believe the two sexes are conspecific and should be recognized under the older name, *N. flava*.

WASHINGTON: Asotin Co.: Fields' Spring St. Prk, 31 Jul 1971, 15 Jun 1972; 4 mi. S Anatone, 3600 ft., 12 Aug 1980. Jefferson Co.: Gold Creek, 5 mi. W Carlton, 19 Jul 1972. Stevens Co.: 2 mi. SE Deer Lake, 27-28 Jul 1973. Whitman Co.: Yakawawa Cyn., 7 mi. NW Colton, 25-27 Jun 1977. Yakima Co.: Naches River, 3 mi. W Naches, 16 Jul 1972. OREGON: Baker Co.: Upper Goose Crk., 34 mi. SE Union, 4160 ft., 20-26 Jul 1975; Lower Goose Crk., 36 mi. SE Union, 4000 ft., 13-19 Jul 1975; Lower Lick Crk., 26 mi. SE Union, 4000 ft., 20-26 Jul 1975. All captured in Malaise traps.

DISCUSSION

Most of the above species share one or more features in common worth noting. For the most part, they are smaller forms that may be overlooked among other specimens in sweep or Malaise trap samples. Frequently they resemble the more numerous and similar appearing species with which they occur. Others, such as *Achalcus oregonensis* and *Neurigona flava*, are yellowish or brown and not at all metallic green like most dolichopodids. Finally, several are captured in isolated and less obvious habitats that may be dismissed by the general Diptera collector: roadside seeps, deep coastal forests and verdant vegetation narrowly bordering streams in otherwise arid locations.

It would seem that many dolichopodid species are not limited in their distributions, but likely occur over much broader geographic ranges throughout the western states as suggested here. Many species were described from limited series in states further east, especially Utah. The dolichopodid fauna of Utah has been extensively sampled by Fred Harmston and George Knowlton, probably explaining the great number of species described by my colleagues from that state. I anticipate that the ranges of these and other dolichopodids will be expanded even further when the habitats mentioned here (e.g., seeps, waterfalls and riparian vegetation in otherwise arid areas) are sampled elsewhere. Interesting distribution patterns for these and other invertebrates will emerge when these areas are more completely known throughout the region.

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A.E.S. FIELD DAY FOR YOUNG ENTOMOLOGISTS

The education committee of our society is planning an entomological field day on Saturday, June 6, 1987. It will be held at the Myrick Conservation Center of the Brandywine Valley Association located about five miles west of West Chester, Penn. Entomologists young and old are invited to participate. Please contact Hal White, Dep't. of Chemistry, Univ. of Delaware, Newark, DE 19716 if you would like to come or wish more information. Additional information will be published in the March-April issue of ENTOMOLOGICAL NEWS.